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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/997,219	11/30/2001	Mark J. Davis	SGT-50	2552

23599 7590 09/05/2003

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EXAMINER

JAGAN, MIRELLYS

ART UNIT	PAPER NUMBER
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2859

DATE MAILED: 09/05/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/997,219

Applicant(s)

DAVIS ET AL.

Examiner

Mirellys Jagan

Art Unit

2859

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 June 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☒ Claim(s) 1-14 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 November 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____. 6) ☐ Other: _____

DETAILED ACTION

Claim Objections

1. Claims 1-14 are objected to because of the following informalities:

Claims 1, 11, and 12 claim that the position of multiple peaks are obtained at each of two or more temperatures, wherein the thermal expansion coefficient, i.e., a single coefficient, is calculated from the differences in the frequency ($\Delta\nu$) of each of the positions at each of the two or more temperatures. In calculating a temperature coefficient as claimed, it appears that numerous coefficients will be obtained since there are multiple frequencies at each temperature, e.g., one coefficient will be obtained for each of the differences in the frequency ($\Delta\nu$) of each of the positions. Therefore, it is not clear from the specification how a single thermal expansion coefficient is obtained from the frequency of multiple peak positions. Appropriate correction is required.

In claim 6, there is lack of antecedent basis in the claim for "said material" in line 1.

Appropriate correction is required.

Claims 2-5, 7-10, 13, and 14 are objected as being dependent on an objected base claim.

Allowable Subject Matter

2. Claims 1-14 would be allowable if rewritten and amended to overcome the objections set forth in this Office Action.

3. The following is a statement of reasons for the indication of allowable subject matter:

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The prior art of record does not disclose or suggest the following in combination with the remaining limitations of the claims:

A method for determining the thermal expansion coefficient of a substance, the method comprising determining at each of two or more temperatures the position of multiple resonant peaks of a Fabry-Perot etalon and calculating the thermal expansion coefficient from the observed differences in wavelength or frequency of the positions at the two or more temperatures (see independent claims 1 and 11).

A method for determining the thermal expansion coefficient of a substance, the method comprising determining at each of two or more temperatures the position of ten or more resonant peaks of a Fabry-Perot etalon and calculating the thermal expansion coefficient from the observed differences in wavelength or frequency of the positions at the two or more temperatures (see independent claim 12).

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following patents disclose Fabry-Perot etalons:

U.S. Patent 4,775,214 to Johnson

U.S. Patent Application Publication 2003/0012250 to Shirasaki

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mirellys Jagan whose telephone number is 703-305-0930. The examiner can normally be reached on Monday-Thursday from 8AM to 4PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Diego Gutierrez can be reached on 703-308-3875. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

mj
August 19, 2003



Mirellys Jagan
Patent Examiner
TC 2800



CHRISTOPHER W. FULTON
PRIMARY EXAMINER